Assembly and Operating Instructions
DPP Dual Port Parallel Interface

Introduction

The DPP Dual Port Parallel card is designed to interface devices using TTL level parallel I/O to computer systems using the SS-50 bus. The DPP card may be installed in any of the 30-pin I/O slots on the SS-50 bus. It may be used in systems with either 4 or 16 addresses per I/O slot. The direction of the TTL buffers may be controlled by jumpers on the board or by a signal from the peripherals. The interrupt request lines for each port may be individually jumpered to the IRQ or FIRQ/NMI bus line.

Card Assembly

The following order of assembly is recommended. The components are all installed on the TOP side of the board and soldered on the BOTTOM side. Before starting assembly the bare board should be carefully inspected for shorts and opens.

1. Insert and solder all resistors.
2. Insert and solder all capacitors. Make sure the tantalum capacitor is inserted with the correct orientation.
3. Insert and solder a 14-pin DIP socket for U1 . Insert and solder 16-pin DIP sockets for the PORT A and PORT B connectors along the top edge of the board. Pin 1 of the DIP sockets should be next to the dot on the board.
4. Insert and solder the 4x2 header strip for interrupt selection and the two 1x2 headers for buffer direction control.
5. Insert and solder the 10-pin Molex connectors along the bottom edge of the board. Insert the key at the position marked with a triangle.
6. Insert and solder the voltage regulator U6.
   Install the Heat Sink on U6.
7. Insert and solder U2,U3,U4 and U5. Note that Pin 1 should be inserted next to the dot.
8. The board is now ready for operation.

Addressing

The DPP board can be used in systems with 4 or 16 addresses per I/O slot. Complete decoding can be obtained in systems using 16 address I/O slots by installing U1. U1 should be removed for 4 address I/O slots. The PIA occupies the first 4 addresses of the I/O slot.

Connector Pinouts

SIGNAL NAME	PORT A CONNECTOR	SIGNAL NAME	PORT B CONNECTOR
CA1	2	CB1	2
CB2 (output)	3	CB2 (output)	3
PA0	13	PB0	13
PA1	12	PB1	12
PA2	11	PB2	11
PA3	10	PB3	10
PA4	7	PB4	7
PA5	6	PB5	6
PA6	5	PB6	5
PA7	4	PB7	4
Buffer Direction	14	Buffer Direction	14
GROUND	8,16	GROUND	8,16
+5 volts	1,9	+5 volts	1,9

The TTL buffers are normally configured as inputs to the DPP card. By installing a jumper at J-A or J-B port A or B may be switched to output. Either port may also be switched to output by grounding or by putting a logic ZERO on pin-14 of the port connector.

Parts List
Dual Port Parallel Interface

Resistors

R1,R2,R3,R4,R5	5.6K ohm 1/4 watt resistor

Capacitors

C1,C2,C3,C4,C5	0.047 mfd disc capacitor
C6	2.2 mfd 25 volt tantalum capacitor

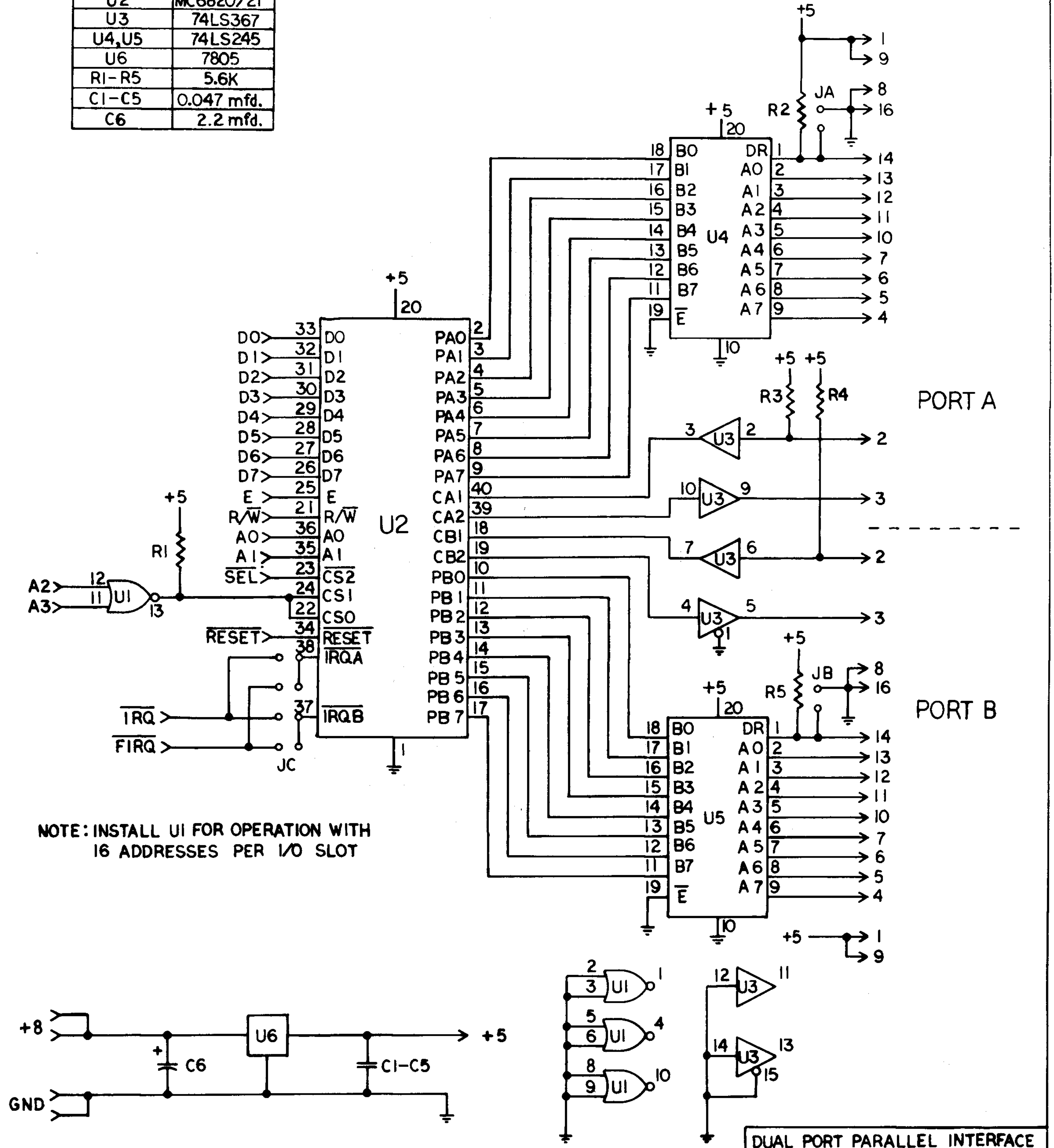
Integrated Circuits

U1	74LS02 quad NOR gate
U2	MC6821 PIA
U3	74LS367 hex buffer
U4,U5	74LS245 octal transceiver
U6	7805 +5 volt regulator

Miscellaneous

Qty. 3	10-pin female Molex connector
Qty. 1	Molex key
Qty. 2	16-pin DIP socket
Qty. 1	14-pin DIP socket
Qty. 1	1x2 header strip
Qty. 1	4x2 header strip
Qty. 4	jumper plugs
Qty. 1	4-40 x 1/4 screw
Qty. 1	4-40 nut
Qty. 1	Heat Sink

PARTS LIST	
U1	74LS02
U2	MC6820/21
U3	74LS367
U4,U5	74LS245
U6	7805
R1-R5	5.6K
C1-C5	0.047 mfd.
C6	2.2 mfd.



NOTE: INSTALL U1 FOR OPERATION WITH 16 ADDRESSES PER I/O SLOT

DUAL PORT PARALLEL INTERFACE	
DPP	REV A
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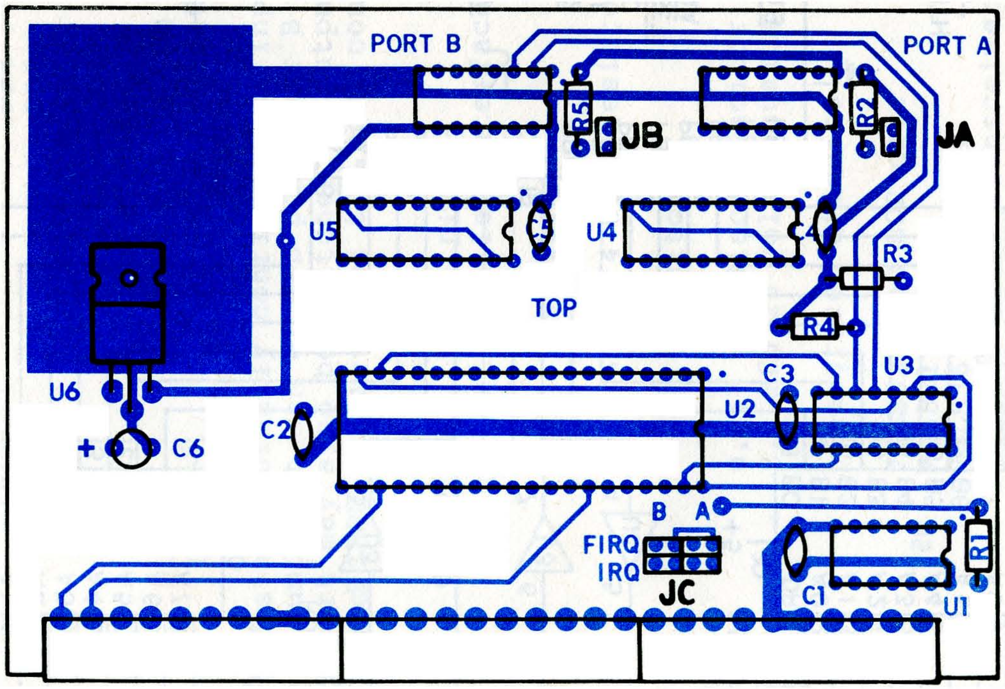

COMPONENT SIDE

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